

WHAT IS CLAIMED IS:

1. A method comprising:
detecting a failure of a first link between a network element and an upstream portion of a communications network;
disabling a second link between said network element and a downstream portion of said communications network to maintain a communications channel between said downstream portion of said communications network and said upstream portion of said communications network in response to said detecting.
2. The method of claim 1, wherein
said downstream portion of said communications network comprises a redundantly-linked network element.
3. The method of claim 2, wherein
said redundantly-linked network element comprises a protocol stack including a first protocol stack layer and a second protocol stack layer,
said first protocol stack layer is associated with one or more applications, and
said disabling comprises notifying said second protocol stack layer of said failure.
4. The method of claim 3, wherein
said network element comprises a primary network element,
said method further comprises enabling a third link between said redundantly-linked network element and a secondary network element, and
said secondary network element is coupled to said upstream portion of said communications network using a fourth link.
5. The method of claim 2, wherein said redundantly-linked network element comprises a multi-homed endstation.
6. The method of claim 2, wherein said network element comprises a datalink layer network element.
7. The method of claim 6, wherein said datalink layer network element comprises an Ethernet switch.

8. The method of claim 2, wherein said upstream portion of said communications network comprises a network layer network element.
9. The method of claim 2, wherein said disabling comprises:
disabling a plurality of links between said network element and a plurality of redundantly-linked network elements.
10. The method of claim 2, wherein said disabling comprises:
disabling a link of a plurality of links between said network element and a plurality of redundantly-linked network elements.
11. The method of claim 10, wherein said disabling said link of said plurality of links comprises:
disabling a link associated with a virtual network.
12. The method of claim 10, wherein said disabling said link of said plurality of links comprises:
disabling a link associated with a port of said network element.
13. The method of claim 2, wherein said disabling comprises:
disabling said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 50 milliseconds of said detecting.
14. The method of claim 2, wherein said disabling comprises:
disabling said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 2 seconds of said detecting.
15. An apparatus comprising:
means for detecting a failure of a first link between a network element and an upstream portion of a communications network;
means for disabling a second link between said network element and a downstream portion of said communications network to maintain a communications channel between said downstream portion of said communications network and said upstream portion of said communications network in response to said failure.

16. The apparatus of claim 15, wherein
said downstream portion of said communications network comprises a
redundantly-linked network element.
17. The apparatus of claim 16, wherein
said redundantly-linked network element comprises a protocol stack including a
first protocol stack layer and a second protocol stack layer,
said first protocol stack layer is associated with one or more applications, and
said means for disabling comprises means for notifying said second protocol stack
layer of said failure.
18. The apparatus of claim 17, wherein
said network element comprises a primary network element,
said apparatus further comprises means for enabling a third link between said
redundantly-linked network element and a secondary network element,
and
said secondary network element is coupled to said upstream portion of said
communications network using a fourth link.
19. The apparatus of claim 16, wherein said redundantly-linked network element
comprises a multi-homed endstation.
20. The apparatus of claim 16, wherein said means for disabling comprises:
means for disabling a link of a plurality of links between said network element
and a plurality of redundantly-linked network elements.
21. The apparatus of claim 20, wherein said means for disabling said link of said
plurality of links comprises:
means for disabling a link associated with a virtual network.
22. The apparatus of claim 20, wherein said means for disabling said link of said
plurality of links comprises:
means for disabling a link associated with a port of said network element.

23. The apparatus of claim 16, wherein said means for disabling comprises:
means for disabling said second link between said network element and said
downstream portion of said communications network within a period of
time substantially less than or equal to 50 milliseconds of said failure.
24. The apparatus of claim 16, wherein said means for disabling comprises:
means for disabling said second link between said network element and said
downstream portion of said communications network within a period of
time substantially less than or equal to 2 seconds of said failure.
25. A machine-readable medium having a plurality of instructions executable by a
machine embodied therein, wherein said plurality of instructions when executed cause
said machine to perform a method comprising:
detecting a failure of a first link between a network element and an upstream
portion of a communications network;
disabling a second link between said network element and a downstream portion
of said communications network to maintain a communications channel
between said downstream portion of said communications network and
said upstream portion of said communications network in response to said
detecting.
26. The machine-readable medium of claim 25, wherein
said downstream portion of said communications network comprises a
redundantly-linked network element.
27. The machine-readable medium of claim 26, wherein
said redundantly-linked network element comprises a protocol stack including a
first protocol stack layer and a second protocol stack layer,
said first protocol stack layer is associated with one or more applications, and
said disabling comprises notifying said second protocol stack layer of said failure.

28. The machine-readable medium of claim 27, wherein said network element comprises a primary network element, said method further comprises enabling a third link between said redundantly-linked network element and a secondary network element, and said secondary network element is coupled to said upstream portion of said communications network using a fourth link.
29. The machine-readable medium of claim 26, wherein said redundantly-linked network element comprises a multi-homed endstation.
30. The machine-readable medium of claim 26, wherein said disabling comprises: disabling a link of a plurality of links between said network element and a plurality of redundantly-linked network elements.
31. The machine-readable medium of claim 30, wherein said disabling said link of said plurality of links comprises: disabling a link associated with a virtual network.
32. The machine-readable medium of claim 30, wherein said disabling said link of said plurality of links comprises: disabling a link associated with a port of said network element.
33. The machine-readable medium of claim 26, wherein said disabling comprises: disabling said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 50 milliseconds of said detecting.
34. The machine-readable medium of claim 26, wherein said disabling comprises: disabling said second link between said network element and said downstream portion of said communications network within a period of time substantially less than or equal to 2 seconds of said detecting.

35. A data processing system comprising:
a redundantly-linked endstation; and
a network element configured to
detect a failure of a first link between said network element and an
upstream portion of a communications network, and
disable a second link between said network element and said redundantly-
linked endstation to maintain a communications channel between
said redundantly-linked endstation and said upstream portion of
said communications network in response to said failure.
36. The data processing system of claim 35, wherein
said network element comprises a primary network element,
said redundantly-linked endstation is configured to enable a third link between
said redundantly-linked endstation and a secondary network element, and
said secondary network element is coupled to said upstream portion of said
communications network using a fourth link.
37. The data processing system of claim 35, wherein
said network element comprises an Ethernet switch.

38. A data processing system comprising:
a redundantly-linked endstation;
a primary network element, wherein
 said primary network element is coupled to an upstream portion of a
 communications network using a first link,
 said primary network element is coupled to said redundantly-linked
 endstation using a second link, and
 said primary network element is configured to
 detect a failure of said first link, and
 disable said second link to maintain a communications channel
 between said redundantly-linked endstation and said
 upstream portion of said communications network in
 response to said failure; and
a secondary network element, wherein
 said secondary network element is coupled to said redundantly-linked
 endstation using a third link.
39. The data processing system of claim 38, wherein
said redundantly-linked endstation is configured to enable said third link, and
said secondary network element is coupled to said upstream portion of said
communications network using a fourth link.
40. The data processing system of claim 38, wherein
said primary network element comprises an Ethernet switch.